

WHAT IS CLAIMED IS:

1. A transport systems comprising:
a burst error detecting unit that monitors a predetermined byte specified in advance in a frame to be monitored in a transmission signal
5 having header information and data information multiplexed into the frame in bytes, detects a burst error based on a change in a state of occurrence of a bit error in the predetermined byte in a predetermined time window, and outputs a burst error detection signal upon detection of the burst error.
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2. The transport systems according to claim 1, further comprising:
an accumulated count unit that counts number of parity error bits in the predetermined byte in a performance monitor period, and holds the number of parity error bits as an accumulated count value, wherein
15 the burst error detecting unit detects the burst error when the accumulated count value is equal to or more than a predetermined value.
3. The transport systems according to claim 2, further comprising:
20 an output holding unit that holds output of the burst error detection signal until the burst error occurs plural times.
4. A method of monitoring a burst error, comprising:
detecting a bit error in a predetermined byte specified in
25 advance in a frame to be monitored in a transmission signal having

header information and data information multiplexed into the frame in bytes;

detecting the burst error based on a change in a state of occurrence of a bit error in the predetermined byte in a predetermined time window; and

outputting a burst error detection signal upon detection of the burst error.

5. The method according to claim 4, further comprising:

counting number of parity error bits in the predetermined byte in a performance monitor period; and

holding the number of parity error bits as an accumulated count value, wherein

the detecting the burst error includes detecting the burst error when the accumulated count value is equal to or more than a predetermined value.

6. The method according to claim 5, further comprising:

setting a bit error rate;

setting a threshold corresponding to number of bits that are error detectable with a normal parity check based on the bit error rate; wherein

the counting includes counting the number of parity error bits based on number of error bits that exceed the threshold.

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7. The method according to claim 5, wherein the counting includes counting the number of parity error bits in the predetermined byte in a plurality of consecutive performance monitoring periods.
- 5 8. The method according to claim 5, further comprising:
setting a hunting cycle of a predetermined period based on the performance monitor period, wherein
the detecting the burst error includes detecting the burst error when the accumulated count value in the hunting cycle is equal to or
10 more than the predetermined value.
9. The method according to claim 8, further comprising:
clearing the accumulated count value when the burst error is detected more than one time within the hunting cycle; and
15 resuming the counting in another hunting cycle.
10. The method according to claim 5, further comprising:
clearing the accumulated count value when the burst error is detected both in a working line and in a protection line within the
20 performance monitoring period; and
resuming the counting in another performance monitoring period.
11. The method according to claim 8, further comprising:
25 setting a guard time of a predetermined period based on a state

of occurrence of the burst error between the hunting cycle and a next hunting cycle;

clearing the accumulated count value when, after the burst error is detected in the hunting cycle, another burst error is detected within

5 the guard time; and

resuming the counting in another hunting cycle.

12. The method according to claim 11, wherein the guard time is variably set based on a saturation characteristic of a bit error in the

10 predetermined byte.